Monitoring Extended Server Environments with GSX Monitor V9

Gain a unified view of your Domino, Sametime, Exchange, and Blackberry Servers

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Find out how you can institute an aggressive monitoring and alerting system without having to install any software on the servers and applications you're responsible for. This article introduces you to GSX Monitor V9, which enables monitoring, alerting, and advanced reporting on extended IBM Lotus Domino, Sametime, Exchange, and BlackBerry Enterprise Server (BES) environments.

Understand the capabilities of the tool, gain insight into how administrators can configure it for fine-grained monitoring and reporting, and get an up-close look at its streamlined interface for flexibly monitoring complex server infrastructures.

Nearly every software administrator must quickly grow accustomed to working in an environment of constant growth and change. Administrators face the never-ending task of updating current collaboration software and expanding offerings to users. For anyone responsible for systems monitoring, one of the many challenges that come with this expansion of offerings is selecting a monitoring tool that can grow with your systems.

Lotus introduced Domino Domain Monitoring (DDM) in Domino 7.0 as a way for Domino administrators to start utilizing the enormous amounts of data that the system produces on a per minute basis. However, the DDM feature falls short if you are also trying to monitor an extended environment that includes IBM Lotus Sametime, Blackberry Enterprise Server (BES), and even Microsoft Exchange, either during a migration or in a state of permanent co-existence.

DDM also lacks the true monitoring, reporting, and alerting powers that are needed to support the expected uptime guarantees that users have grown to accept and need. According to many administrators, some of the features and functions currently missing in this tool include:

- A rich graphical interface
- The ability to generate reports
- Profiles for alerts
- Remote access through Web and mobile devices

To meet your monitoring requirements you must turn to business partners or vendors for a solution, not just a tool. GSX Monitor V9 specifically addresses these issues and provides additional functionality as well. With years of monitoring Domino environments, GSX has re-engineered its own monitoring tool to provide functionality beyond what has been previously available.

In this article, we will show how you can monitor an extended environment with GSX Monitor V9 and how this tool addresses many of the challenges you face each day as an administrator or the watch sentry for your Domino environment.

Meet GSX Monitor V9

The first item you should look for in any monitoring tool is an easy-to-understand user interface (UI). It's also desirable to have the flexibility to modify and manipulate this interface to blend into your organization's monitoring infrastructure.

You also need to consider the servers you will monitor and what operating systems they support. GSX Monitor V9 does not install code on the servers it monitors, which means that it can support all versions of the software applications it monitors (Domino, Sametime, Exchange, BES, URLs, and so forth) across all platforms. The only requirements are a Windows environment with a Lotus Notes client installed. You can add any new servers to be monitored dynamically.

The main view of GSX Monitor V9 is shown in **Figure 1**. The first thing to note is that this UI was built using Microsoft Windows.Net components, which gave GSX the ability to design a smooth and easy-to-understand UI. We will highlight the benefits of a common UI for monitoring different software applications as we walk through GSX Monitor's different features and the technical merits of each.

Using the Lotus Notes client and an ID file installed on the monitoring machine noted above, the GSX Monitor client

accesses all of the servers you monitor. GSX recommends that the ID file has at least reader access to most of the system databases. You can extend the ID's rights as necessary if you wish to perform actual administrative tasks from the monitoring station such as restarting server tasks. It is also recommended that you keep this ID secure through Lotus Notes features such as multiple passwords.

The main view is a simple display of the status of your servers. Some items highlighted in **Figure 1** include a color coding schema that you can customize to match your company standards and drag-and-drop ability to place server entries anywhere on the monitoring screen. The ability to create sections, or server groupings, assists you in displaying servers by function, geographic location, or any sorting order you desire.

The server name can be displayed hierarchically or through an alias.

From there, the main server status and all associated subtasks — such as Router, HTTP, Agent Manger, and SMTP — are also displayed through color coding. You can set the colors and the alert-level thresholds at which they change in the server settings area.

You can also hover your mouse over any icon to open up a status indicator.

An advantage of GSX Monitor V9 is that the server settings area enables you to specify not only the tasks to monitor and at what intervals, but it also lets you set a maintenance window during which alerts will not be sent. You can do all of this on a per-server basis in order to take into account your global infrastructure.

All of the items on the main view also have numerous right-click submenus that offer fast access to advanced features, as shown in **Figure 2**. You have the ability to

immediately scan the server, as well as manage sub-areas such as mail alerts, and you can even ping the server through a TCP/IP connection.

Before we go deeper into how GSX Monitor V9 monitors and reports on software and other services (i.e., the subtasks of each software application, such as mail), you should note that all GSX Monitor's capabilities are now accessible on your mobile devices, giving you the ability to not only receive alerts via email or Short Message Service (SMS), but also to see the status of servers at any time from a live device, as shown in **Figure 3**. Notice the grouping of servers by type of monitoring, the total numbers of servers being monitored per type, and the same simple color coding for quickly viewing server status.

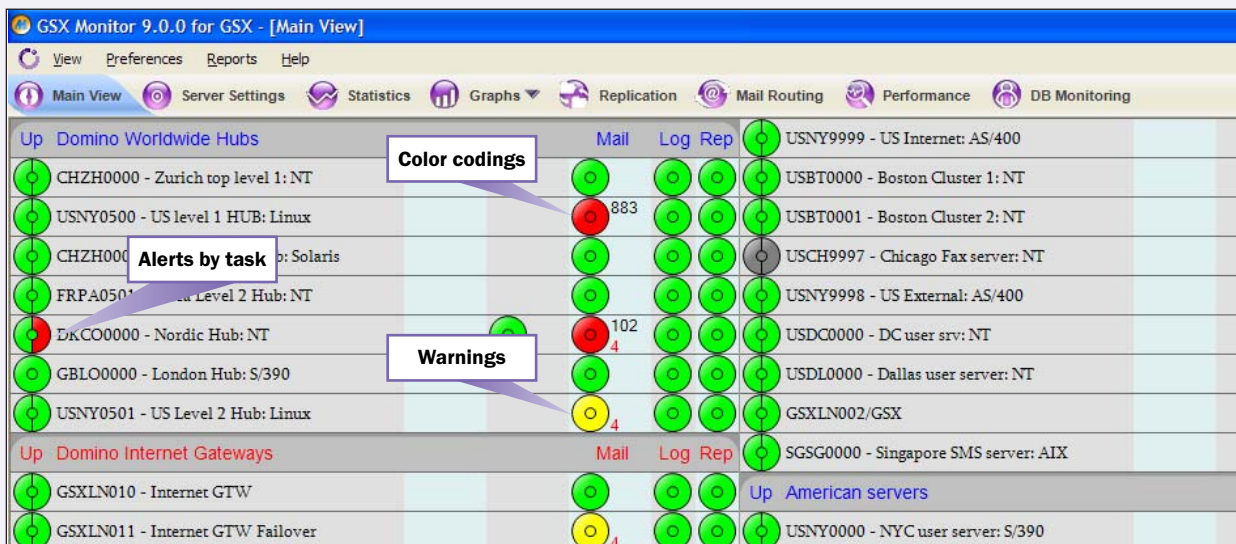Mobile access is an unparalleled capability that is not available with other

Figure 1 The main view of GSX Monitor V9

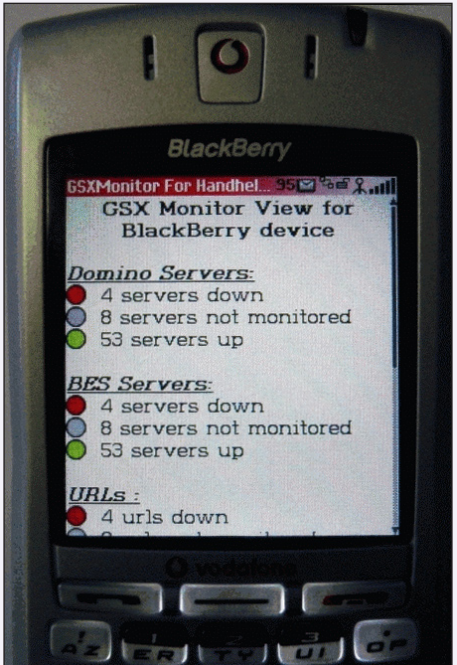**Figure 2** The right-click submenus from the main view

Figure 3 Server status sent to a live device by GSX Monitor

monitoring solutions designed for Lotus environments, even DDM from Lotus.

Mail Flow Monitoring

For any Lotus Domino or Microsoft Exchange environment, it's critical for administrators to be able to monitor both mail routing flow (the direction that mail routing takes through the environment) and server up time and accessibility. Administrators who are unaware of mail issues until a user, or worse yet, a company executive calls is an administrator who appears not to be able to manage a healthy email system.

Built-in tools generally offer only partial monitoring, and don't provide good reporting abilities. GSX Monitor addresses both of these issues.

You can easily configure mail probes to flow through your mail system to monitor Service Level Agreement (SLA) times and retry intervals. Once you have configured these probes, you are able to meet the requirements from any department, team, or mail server with granular SLA configurations as shown in **Figure 4**. The alerts from these probes may be sent to different addresses and groups as shown. From these

probes you are able to immediately see probe statistics based on SLAs or you can generate mail flow and routing reports – capabilities that Domino, Sametime, BES, and Exchange do not include inherently.

Thus, you can satisfy all of your mail flow reporting needs in a single monitoring tool. You can designate a target database in Lotus Notes or any other database as the mail.box file on the system, which gives you flexibility across all the servers.

Extended Product Monitoring

Let's look now at GSX Monitor's capabilities for monitoring BES and IBM Lotus Sametime.

Blackberry Enterprise Server

Blackberry Enterprise Server (BES) is becoming an integral part of every mail system, whether the system is Lotus Notes or Microsoft Exchange. While there are some stand-alone monitoring tools available for BES in the market, GSX delivers monitoring for this server as an integrated part of the monitoring tool.

After you provide the proper access to the server and databases to expose all of the tool's monitoring capabilities, you can right-click on any BES icon from the main

view to quickly access an advanced menu, as shown in **Figure 5**. Notice that in addition to seeing all of the necessary server status information, you may also see:

- User configurations
- User statistics
- Device information

In addition, you can manage user accounts from the advanced menu. The Blackberry SRP database is also included in the monitoring abilities.

IBM Lotus Sametime

Working outward from your mail system, let's turn to IBM Lotus Sametime, which provides presence and chat capabilities across Lotus Notes, Blackberry, and Microsoft products.

The real-time communication provided in Sametime is now considered part of the messaging environment in many companies. GSX takes this into account by integrating key Sametime monitoring capabilities with built-in alerts and reports that are not offered in DDM or in the Sametime product itself.

Figure 6 shows the immediately available information as you hover your mouse icon

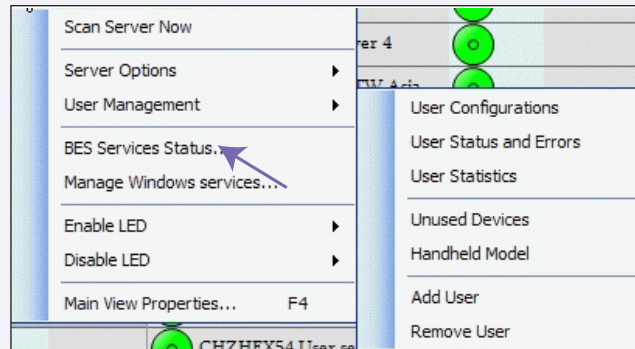**Figure 4** Configurable mail SLA probes

Figure 5 The BES Services Status right-click submenu
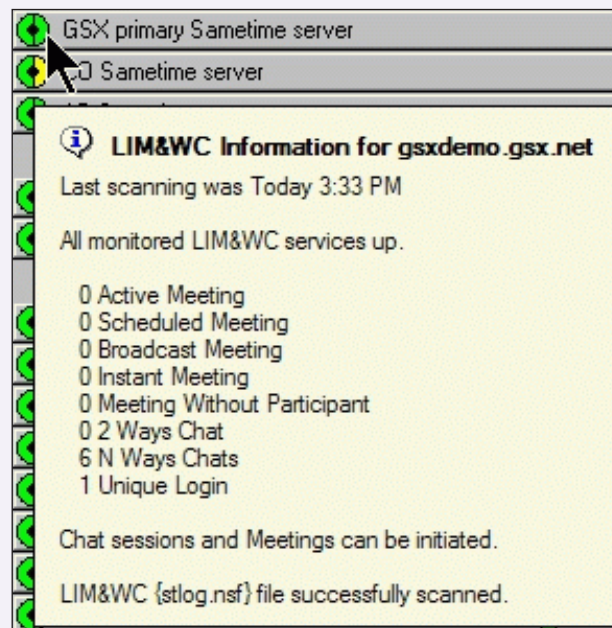

Figure 6 Right-click context information for Sametime servers

over any of the Sametime servers that you have configured for monitoring. Notice that you get current information on meetings and chat services as of the time of the last scan.

In order to gain the most information, you need to provide a user name and password in the server configuration area; this enables GSX Monitor V9 to properly

access all of the services that Sametime offers. Once again, nothing is installed on your Sametime server, so performance doesn't suffer.

Reporting, Analyzing and Graphing

As an administrator, you are responsible for reporting on how healthy your systems

are over any given period. You need to provide a variety of reports: simple uptime (which everyone hopes is always 100%), mail flow, replication integrity, and services status. GSX Monitor meets this need with on-the-fly viewing and on-demand reporting capabilities.

In GSX Monitor V9, you can create automated reports that can be emailed to anyone, use the Web browser interface to see and create dynamic reports in a PDF file, or even export statistics for creating advanced spreadsheets in your favorite spreadsheet software. These inherent capabilities of the tool give you unprecedented opportunities for analysis and comparison.

The highlighted portion of **Figure 7**

>> Note

In Domino, it's possible for a Web service or page that is not responding due to a hung thread to show as running in the server console. The GSX Monitor enables you to monitor any URL you designate on a polling cycle, and it lets you see both the HTTP server task on Lotus Domino and the response from the HTTP task. DDM does not offer this level of monitoring capability.

Figure 7 Sample statistics gathered by GSX Monitor

shows some of the statistics gathered by the tool. From these collected statistics, GSX Monitor begins to build the graphs that enable you to easily see the status of your environment over any timeframe that you designate or in a configured reporting cycle.

Once you have configured all the parameters around monitoring, GSX Monitor begins collecting the data for reporting.

New in GSX Monitor V9 is an enhanced Web browser view that enables you to access the data from an internal Web server engine that comes with the monitor; you also have the option to export the data to another Web server you designate. This gives you flexibility, security, and a

portable command console in a single view as shown in **Figure 8**.

An administrative strength is knowing the trends in your collaboration environment — the times of day and the weeks and months that see the most mail traffic, when there is the most chat traffic, and how often your Web servers are unresponsive. Unfortunately, without the proper tools this information is difficult to compile and keep track of. DDM provides a record of the alerts it issues and the statistics it collects, but it provides no easy extraction or viewing options for this data.

Figure 9 shows some GSX output in a graph, which as we mentioned earlier, is exportable. Notice that it is very clear and

easy to read. Notice too that you can view this same graph for each configurable area, including server clusters, by making a simple selection from the top menu. You may view the graphs as column charts, as shown, or line graphs.

Summary

In every organization, even minimal downtime can mean the loss of considerable revenue, and it is the responsibility of the administrator to not only tune the environment for peak performance, but also to know when peak performance is lacking. Unfortunately, the built-in monitoring abilities of IBM Lotus Domino, IBM Lotus Sametime, Blackberry
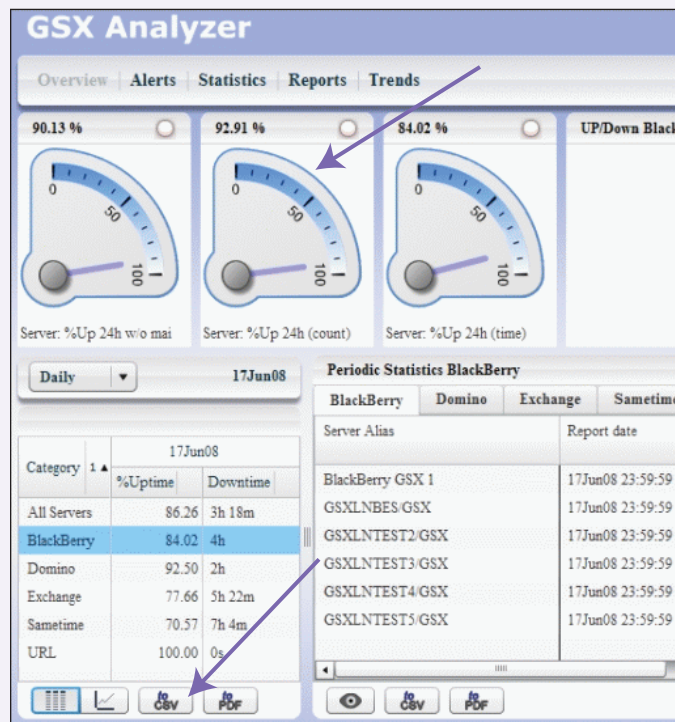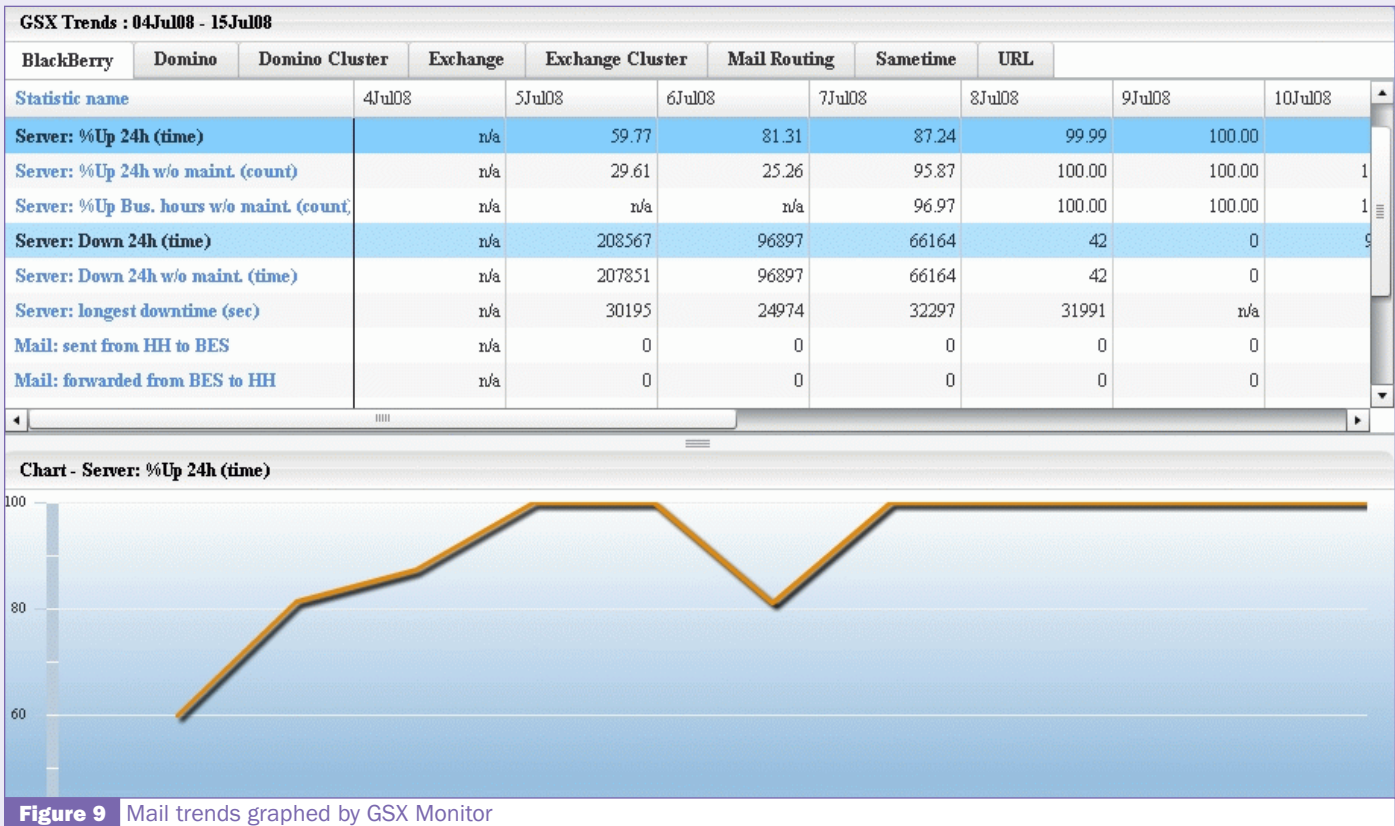

Figure 8 The Web browser view provides a portable command console

GSX Trends : 04Jul08 - 15Jul08

BlackBerry	Domino	Domino Cluster	Exchange	Exchange Cluster	Mail Routing	Sametime	URL

Statistic name	4Jul08	5Jul08	6Jul08	7Jul08	8Jul08	9Jul08	10Jul08
Server: %Up 24h (time)	n/a	59.77	81.31	87.24	99.99	100.00	
Server: %Up 24h w/o maint. (count)	n/a	29.61	25.26	95.87	100.00	100.00	1
Server: %Up Bus. hours w/o maint. (count)	n/a	n/a	n/a	96.97	100.00	100.00	1
Server: Down 24h (time)	n/a	208567	96897	66164	42	0	9
Server: Down 24h w/o maint. (time)	n/a	207851	96897	66164	42	0	
Server: longest downtime (sec)	n/a	30195	24974	32297	31991	n/a	
Mail: sent from HH to BES	n/a	0	0	0	0	0	
Mail: forwarded from BES to HH	n/a	0	0	0	0	0	

Chart - Server: %Up 24h (time)

Figure 9 Mail trends graphed by GSX Monitor

Enterprise Server, Microsoft Exchange, and Web servers in general do not provide the necessary reporting, viewing, and graphing abilities outside of an advanced notification system. GSX Monitor V9 addresses all of these needs and more.

With no monitoring software to install on your systems, you have a passive monitoring tool that you can build into an aggressive alerting system with advanced reporting capabilities. And it's all available from a central reporting system with access locally at the monitor, through a Web browser interface, or through notification profiles (SMS or email-based) delivered to a PDA.

You no longer need to sit in front of your computer watching and waiting for a system issue. You can focus on providing advanced features and functions to your environment while a trusted tool watches your mail flow, replication, instant messaging, system uptime, and SLAs. Then when you are ready, you simply create a report showing the stability and usage of the environment — all with no installation on any of the servers and the capability to dynamically add servers to monitor. ■

Based in New York, **Alex Guillot** is responsible for all strategic partnerships and alliances at GSX, and he oversees worldwide marketing efforts. With more than 14 years of global sales, marketing and management experience, he has successfully led U.S. operations for several Europe-based technology companies, including Marvin Software, Inc., eDevice Inc., and Baracoda Inc. Alex holds an MBA from University of North Carolina at Charlotte.

About GSX

GSX is the global technology leader in monitoring software for unified communications servers for IBM Lotus Notes and Domino, Microsoft Exchange, and Blackberry Enterprise Server. Monitoring more than 5 million email boxes for over 500 enterprise customers, GSX enables global enterprises to achieve unparalleled value through rapid installation, on-demand reporting, and predictive analytics. The company represents nearly 30% of Fortune 100 companies. With operations in the United States, United Kingdom, France, and Switzerland, GSX's solutions are backed by first-class technical services worldwide. To learn more, visit: www.gsx.net.